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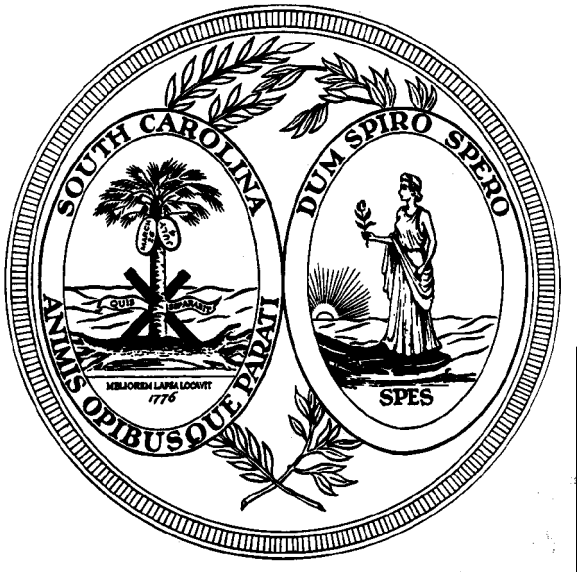
Report to the General Assembly

October 1999

A Review of South Carolina School Bus Purchases



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A Review of South Carolina School Bus Purchases was conducted by the following audit team.

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Report to the General Assembly

A Review of South Carolina School Bus Purchases

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Synopsis

Members of the South Carolina General Assembly asked us to review the purchase of school buses by the State Department of Education (SDE). They asked that we review the specifications and SDE's compliance with procurement laws. We specifically excluded school bus operations from our review. We found that improvement was needed in the development of specifications, the schedule for replacing buses, and the process of procuring buses. Our findings are summarized as follows.

- SDE requires that its conventional and transit buses have 250 horsepower. This horsepower requirement may be excessive, resulting in unnecessary extra cost for engines and transmissions estimated by one manufacturer to be as much as $7,000 for each conventional bus.
- SDE's specifications for its transit bus frames may be restrictive, resulting in reduced competition and potentially higher prices. One bus manufacturer filed a protest in December 1998, stating that it no longer sold transit buses which met SDE's specifications for frame strength. The department could not, however, provide documentation that the frame it requires is more durable than the frame currently sold by the protesting manufacturer.
- SDE has not purchased any 54- to 66-passenger conventional buses for its regular routes since FY 89-90. For its regular routes, the department has purchased only rear-engine transit buses with a seating capacity of 78 passengers. This practice may make it more difficult for local school districts to match seating capacities with low-density rural routes. In addition, the purchase price for rear-engine transit buses can be approximately 10% to 20% more than comparably equipped conventional buses of the same seating capacity and approximately 5% to 10% more than front-engine transit buses.
- South Carolina has not been funding regular school bus and service vehicle replacement schedules. SDE has proposed to the General Assembly regular replacement schedules for its buses and service vehicles. SDE's proposed bus replacement schedule, however, is not based on formal analysis of the optimal replacement point.
- SDE has not promulgated regulations that define the process for establishing school bus specifications. There is no regulation that requires approval from the State Board of Education. Without regulations that define the process for establishing specifications, including approval by the board, the public may not be adequately informed, and the board's accountability is reduced.

- SDE's restrictive specifications prevented the purchase of school buses through the regular procurement process in FY 98-99. A lengthy procurement process and the possibility of emergency procurements may continue unless the specifications for school buses are changed.

- We could find no evidence that SDE staff conduct detailed inspections when buses are delivered to ensure that they meet the required specifications. To help ensure compliance with specifications, random inspections could be conducted by SDE when buses are delivered.

- SDE and the Budget and Control Board Materials Management Office (MMO) could investigate ways to better meet the needs of school districts, obtain lower prices, and produce a more efficient procurement process. For example, SDE and MMO could:

  - Purchase buses jointly with other states in order to increase the volume of the purchase and decrease the cost of each bus.

  - Allow vendors to submit separate bids for the bodies and the chassis of conventional buses.

  - Purchase a variety of seating capacities and types of buses based on the needs of local school districts.

  - Divide the procurement process into two stages in order to avoid "last minute" protests regarding specifications. Vendors could first be required to submit a detailed description of the buses they would like to sell to the state so that compliance with the state's specifications could be determined. Vendors who have had their buses pre-approved would then be permitted to submit price bids.

Introduction

Audit Objectives and Scope

Members of the South Carolina General Assembly requested that the audit council review the purchase of school buses by the State Department of Education (SDE). They requested a review of school bus specifications and compliance with existing procurement laws.

We specifically excluded school bus operations from our review. This is a report on the system or structure used by SDE in the purchase of school buses.

Audit objectives were identified primarily through interviews and correspondence with the audit requesters, as well as through interviews with the staffs of SDE and the Budget and Control Board Materials Management Office (MMO). We focused on the following objectives:

- ❑ Determine whether SDE has an adequate system for purchasing cost-effective and safe school buses.
- ❑ Determine whether SDE and MMO have purchased buses in compliance with state law.
- ❑ Review the adequacy of the funding of school buses.

The scope of the audit is generally FY 94-95 through FY 98-99. From FY 89-90 through FY 93-94, SDE purchased only 350 buses. However, from FY 94-95 through FY 98-99, SDE purchased 2,111 buses. The audit includes a determination of whether controls in the purchasing process are adequate to protect state resources, and whether the desired results established by the General Assembly are being achieved.

Methodology

We reviewed records and interviewed staff of SDE, including bus school maintenance shop personnel. We also contacted school district transportation officials, as well as staff of the Budget and Control Board Offices of Materials Management and Motor Vehicle Management, the Procurement Review Panel, and the Office of the Comptroller General.

Some computer-processed data were used to develop the report. Where computer-processed data were significant to our findings, we performed limited tests to verify their validity and reliability.

Where applicable, the program's processes and operations were compared with those in other southeastern states. We obtained information from Florida, Georgia, Kentucky, North Carolina, Tennessee, Virginia, and the National Highway Transportation Safety Administration. We also reviewed the *National Standards for School Buses and School Bus Operations*, published by the 1995 National Conference on School Transportation. Finally, we reviewed available management studies. We designed our audit to avoid duplication with audits conducted by other qualified entities.

This audit was conducted in accordance with generally accepted government auditing standards.

Background and History

The control and management of school bus transportation in the state is vested in the State Board of Education. Through the South Carolina Department of Education, the state owns, manages, and maintains the school bus fleet for all South Carolina public schools. According to SDE, in school year 97-98, 511,835 students were transported daily.

The State Board of Education is responsible for operating expenses of state-owned buses and for the replacement of obsolete equipment. SDE allocates state funds to the state's school districts to support the operation of the school transportation system. Local school districts hire and supervise bus drivers.

Section 59-67-540 of the South Carolina Code of Laws grants authority to the State Board of Education to "establish and operate maintenance and supply stations, on an experimental or permanent basis" if it is determined to be in the best interest of the state. SDE operates 44 school bus maintenance facilities located in the 46 counties.

Section 59-67-490 of the South Carolina Code of Laws requires that the local board of trustees of each school district make a thorough study of transportation needs and submit proposed bus route descriptions to the State Board of Education for annual approval. SDE purchases the school buses used to transport pupils through the state procurement process.

SDE's fleet of approximately 5,600 buses consists primarily of three types of vehicles.

Conventional Buses — These are school buses with a hooded engine located in front of the windshield. Conventional buses comprise about 62% of SDE's fleet.

Transit Buses — These are flat-nosed school buses with an engine located behind the windshield, either at the front or the rear of the bus. Transit buses comprise about 38% of SDE's fleet.

Type A Buses — This is the smallest type bus in SDE's fleet. There are only three Type A buses in SDE's fleet.

SDE's buses are used to transport "regular route passengers" and "special needs passengers" (see Appendix A). Most of the buses for special needs passengers can accommodate wheelchairs. The following table shows the buses purchased by SDE from FY 93-94 through FY 99-00.

Table 1.1: SDE School Bus Purchases From FY 93-94 Through FY 99-00

Fiscal Year	Type of Bus	Number of Buses	Expenditures [1]
93-94	Type A Conventional	3 47	$1,980,562
94-95	Transit	480	$25,156,772
95-96	Transit	1,631	$84,976,814
96-97	none purchased		
97-98	none purchased		
98-99	none purchased		
99-00 [2]	Conventional	57	$3,931,803

1 Expenditures may include funds carried forward from prior years.
2 Using funds appropriated in FY 98-99, SDE has issued a purchase order for 57 special needs buses, one of which is being purchased for the School for the Deaf and Blind.

Source: SDE.

Chapter 1
Introduction

School Bus Specifications and Replacement Schedule

In our review of SDE's system for purchasing school buses, we found that the department has established some higher-cost specifications without using formal analysis to prove that the specifications will result in buses that are safer or cost-effective. We found that the state has not funded regular school bus and service vehicle replacement schedules and that SDE's school bus replacement schedule goals are not based on formal analysis.

Without formal analysis of its specifications, SDE's ability to assess the safety and cost-effectiveness of new buses is limited. Without formal analysis of its replacement schedule goals, SDE's ability to determine its funding needs is limited.

School Bus Specifications

Until FY 90-91, SDE purchased only conventional style buses for its regular routes. SDE's regular route conventional buses seat from 54 to 66 passengers. In recent years, SDE has changed the types and capacities of the buses it purchases:

- In FY 90-91, SDE purchased ten transit buses for its regular routes. Five were front-engine buses with 72-passenger capacity, and five were rear-engine buses with 78-passenger capacity.
- In FY 94-95 and FY 95-96, SDE purchased a combined total of 1,900 rear-engine transit buses with a seating capacity of 78 for its regular routes. During the same period, SDE purchased 211 rear-engine transit buses with a seating capacity of 35 for its special needs routes.
- In 1999, the department entered a contract to purchase 57 conventional buses with a seating capacity of 15 for special needs routes.

Engines and Transmissions

SDE requires that its conventional and transit buses have 250 horsepower. This horsepower requirement may be excessive, resulting in unnecessary extra cost for engines and transmissions.

Safety

According to an SDE official, buses with 250 horsepower engines are safer than those with smaller engines because they enable the buses to turn onto roadways more quickly. The department, however, has no data or formal analysis indicating that buses with 250 horsepower engines have lower accident rates.

Durability and Cost-Effectiveness

According to an SDE official, buses with 250 horsepower engines are more durable than those with smaller engines. However, the cost-effectiveness of higher horsepower engines can be determined only by comparing the benefits of added durability with the higher price, taking into account any difference in warranties. The department has not conducted analysis of this type.

Price

On September 24, 1998, a bus manufacturer proposed numerous specification changes to the Materials Management Office (MMO) regarding conventional bus specifications. MMO forwarded the proposal to SDE's specifications committee. The manufacturer stated:

> Our [190 horsepower] engine and transmission recommendation alone will be a savings of approximately $7,000 per unit compared to the specifications that South Carolina has established.

On June 30, 1999, a different bus manufacturer made a presentation with similar suggestions for savings to SDE's specifications committee. An SDE official stated that the savings estimates made by the two different manufacturers are inflated.

Even the buses purchased for the mountain communities of Buncombe County (Asheville), NC and Roanoke County, VA have lower horsepower than is required for the buses used throughout South Carolina.

Other States

Neither Florida, Georgia, Kentucky, North Carolina, Tennessee, nor Virginia requires that school buses with capacities up to 78 passengers have 250 horsepower engines. North Carolina, for example, routinely purchases 66-passenger conventional buses with 190 horsepower and 78-passenger rear-engine transit buses with 210 horsepower. Florida has a menu of different engines on its state contract, including a minimum of 175 horsepower for 65-passenger conventional buses and a minimum of 210 horsepower for its 84-passenger, rear-engine transit buses.

Fulton County (Atlanta), GA, and Nashville, TN, purchase buses with lower horsepower than is required in South Carolina. Even the buses purchased for the mountain communities of Buncombe County (Asheville), NC, and Roanoke County, VA, have lower horsepower than is required for the buses used throughout South Carolina.

Bus Frames

SDE's specifications for its bus frames may be restrictive. One bus manufacturer filed a protest with the state's chief procurement officer in December 1998, requesting approval for a transit bus frame that did not meet SDE's specifications for frame strength. The company argues that its frame would fully meet South Carolina's performance needs and that it is accepted in every other state. South Carolina has not accepted this manufacturer's frame.

According to an SDE official, its frame specifications make school buses more durable. The department could not, however, provide documentation that the frame it requires is more durable than the frame currently sold by the protesting manufacturer. When a specification of undemonstrated merit prevents a vendor from bidding on a state contract, competition is reduced, potentially resulting in a higher price.

Seating Capacity and Type of Bus

SDE has not purchased any 54- to 66-passenger conventional buses for its regular routes since FY 89-90. This practice may make it more difficult for local school districts to match seating capacities with bus routes. For example, using higher-capacity buses on low-density rural routes may result in excessively long bus rides for some students.

SDE officials report that, by purchasing *only* rear-engine transit buses with a seating capacity of 78 passengers for its regular routes in FY 94-95 and FY 95-96, the size of the statewide fleet has been reduced by almost 400 buses. However, the department could have achieved its bus reduction goals for high-density routes at lower cost by purchasing less expensive front-engine transit buses.

Safety

SDE officials state that transit buses are more maneuverable than conventional buses and safer because the driver's view of students walking in front of the bus is not blocked by the hood of the bus. An official with the National Highway Transportation Safety Administration also cited the visibility benefits of transit buses, but stated his agency has no research indicating that the rate of accidents and injuries for conventional buses is different than the rate for transit buses. Conventional buses in South Carolina are equipped with "crossing control arms" which require passengers to walk far enough in front of the bus for the driver to see them. In addition, conventional buses are equipped with mirrors with which the driver can see what would otherwise be blind spots.

SDE . . . could not provide documentation that conventional buses and front-engine transit buses have higher accident or injury rates then rear-engine transit buses.

Rear-engine transit buses, according to SDE officials, are safer than front-engine transit buses. For example, a department official noted that rear-engine transit buses have greater accessibility than front-engine transit buses when students and drivers board and exit the bus. He also stated that the fuel tank location is safer in rear-engine transit buses than in front-engine transit buses.

Although SDE has concerns about safety, it could not provide documentation that conventional buses and front-engine transit buses have higher accident or injury rates than rear-engine transit buses.

Durability and Cost-Effectiveness

According to an SDE official, a transit bus is more durable than a conventional bus. The department could not, however, provide documentation that transit buses are more durable. Furthermore, if it could be documented that transit buses are more durable, their cost-effectiveness could be determined only by comparing the added durability with the higher price. The department has not conducted this type of analysis.

Price

For routes with fewer passengers per mile, it may be more efficient to purchase conventional buses. However, for routes with many passengers per mile, it may be more efficient to purchase front-engine transit buses.

We contacted the company from which SDE has purchased all of its buses from FY 94-95 to date. An official with this company stated that a rear-engine transit bus can cost approximately 10% to 20% more than a comparably equipped conventional bus with the same seating capacity, and approximately 5% to 10% more than a front-engine transit bus.

Manufacturers sell conventional buses with seating capacities ranging generally from 34 to 78 passengers. Transit buses have seating capacities ranging generally from 42 to 90 passengers. Therefore, for routes with fewer passengers per mile, it may be more efficient to purchase conventional buses. However, for routes with many passengers per mile, it may be more efficient to purchase front-engine transit buses.

Other Higher-Cost Specifications

There are other higher-cost specifications required by South Carolina which we did not review in detail. For example, two different manufacturers have suggested that South Carolina change its specifications for axles, suspensions, and alternators. On June 30, 1999, one manufacturer gave SDE's specifications committee a preliminary savings estimate for these components of more than $2,000 per conventional bus. An SDE official stated that this manufacturer's savings estimates are inflated. Nonetheless, during our review SDE reported that it is changing its alternator specification.

Potential for Savings in 1999 Purchase

In 1999, South Carolina entered a contract to purchase 57 conventional special needs buses with 250 horsepower, a wheelchair lift, and a seating capacity of 15 for $68,979 per bus. In Florida, the base price in the 1999 state contract for a conventional special needs bus approximately the same size as South Carolina's, with 190 horsepower, a wheelchair lift, and a seating capacity of 19 is $47,267. In Georgia, under a 1999 local contract, Fulton County (Atlanta) schools purchased 5 conventional special needs buses approximately the same size as South Carolina's, with 190 horsepower, a wheelchair lift, and a seating capacity of 19 for $52,201 per bus.

It may be that the buses in Florida and Georgia exclude important features whose benefits can be demonstrated. Nonetheless, these very large price differentials provide incentive for South Carolina to reevaluate its specifications.

Conclusion

It is likely that a reevaluation of South Carolina's school bus specifications will yield significant savings that will be amplified by the large number of buses purchased. With the savings, the state could purchase more buses, reducing the problem of an aging fleet. The state might also determine that there are other areas of school bus purchasing or operations in which the additional funds could be used.

Replacement Schedule

South Carolina has not been funding regular school bus and service vehicle replacement schedules. SDE's school bus replacement schedule goals are not based on formal analysis. When a regular replacement schedule is not funded, there is reduced assurance that the buses can be operated in a safe and reliable manner. However, when replacement schedule goals are not based on formal analysis there is reduced ability to determine funding needs.

SDE's fleet of buses is aging. As of July 1, 1998, about 60% of the department's 5,582 buses had been driven more than 100,000 miles or were more than 10 years old. About 31% (1,748) of the buses had been driven more than 150,000 miles or were more than 15 years old. About 5% (307) of the buses had been driven more than 200,000 miles or were more than 20 years old. In addition, about half of the 497 service vehicles operated by SDE were purchased in the 1970s. See Appendix A for an inventory of school buses by shop location.

SDE officials report that funding from the General Assembly has been inadequate as well as inconsistent from year to year. Table 2.1 lists SDE's school bus expenditures from FY 89-90 through FY 99-00. The funding volatility shown not only makes planning and purchasing difficult for SDE in the short run, it can cause these same problems in the long run because large portions of the fleet are likely to wear out at approximately the same time.

Table 2.1: SDE School Bus Purchases From FY 89-90 Through FY 99-00

Fiscal Year	Number of Buses	Expenditures [1]
89-90	265	$8,134,211
90-91	10	$456,855
91-92	20	$783,205
92-93	5	$218,595
93-94	50	$1,980,562
94-95	480	$25,156,772
95-96	1,631	$84,976,814
96-97	0	$0
97-98	0	$0
98-99	0	$0
99-00 [2]	57	$3,931,803

1 Expenditures may include funds carried forward from prior years.
2 Using funds appropriated in FY 98-99, SDE has issued a purchase order for 57 special needs buses, one of which is being purchased for the School for the Deaf and Blind.

Source: SDE.

SDE has proposed to the General Assembly that regular replacement schedules be instituted for its buses. Under the department's most recent proposal, conventional buses would be replaced at 150,000 miles or 15 years and transit buses would be replaced at 200,000 miles or 20 years. Neither of these proposed schedules, however, is based on formal analysis of the optimal replacement point. In addition, SDE officials report that their proposed school bus replacement schedules are based, in part, on their perception of funding likely to be appropriated by the General Assembly.

For its service vehicles, SDE has proposed using replacement schedules established by the State Budget and Control Board. For example, Budget and Control Board policy requires that service trucks be replaced after a minimum of 100,000 miles and a maximum of ten years of use.

We compared SDE's proposed school bus replacement schedule to those in other states.

Table 2.2: School Bus Expenditures From FY 89-90 through FY 98-99

State	Replacement Schedule Goals
Georgia*	10 years for conventional buses. 14 years for transit buses.
North Carolina*	165,000 miles or 20 years for buses purchased through 1993. 200,000 miles or 20 years for buses purchased after 1993.
South Carolina	150,000 miles or 15 years for conventional buses. 200,000 miles or 20 years for transit buses.
Tennessee*	12 years for conventional buses. 15 years for transit buses.

* Some school districts may deviate from these goals.

Source: Department of Education staff in Georgia, Tennessee, North Carolina and South Carolina.

In general, a replacement schedule should be based on a comparison of the costs and benefits of replacing buses with the costs and benefits of not replacing buses. Determining the optimal replacement point, however, is difficult to do with precision and is subject to differing points of view. For example, although older buses often have lower levels of safety and reliability than newer buses, the value of these factors can be difficult to quantify. And although older buses can cost more to maintain, in some instances the higher cost of depreciation that comes with a new bus can be more than the higher cost of maintenance that comes with an older bus.

In spite of the imprecision inherent in determining replacement goals, it is important that SDE communicate to the General Assembly goals based on formal analysis. Then, the General Assembly can make a more informed decision regarding achievement of the goals.

Currently, the department keeps data only on the cost of parts and fuel for each school bus model year. To conduct formal vehicle replacement analysis, SDE will need to add a labor component to its maintenance and repair cost data.

Funding proposals from SDE regarding school bus replacement should occur only after the department conducts a thorough reevaluation of the specifications it requires.

Funding proposals from SDE regarding school bus replacement should occur only after the department conducts a thorough reevaluation of the specifications it requires (see p. 5). Potential savings from specification changes may lower the cost of achieving replacement schedule goals. Also, because we reviewed only a small part of the state's educational system, we were not in a position to determine whether a formal replacement schedule could be financed with existing sources of education revenue or whether there is a need for additional revenue.

Approval of School Bus Specifications

The State Department of Education has not promulgated regulations that define the process for establishing school bus specifications. According to an SDE document, the transportation staff, with the assistance of an advisory committee, makes specification decisions.

The department's school bus specifications committee was established in 1994 and is composed of transportation employees from around the state. Prior to 1994, the director for maintenance at the SDE office of transportation and his staff established the specifications with final approval by the director of transportation. Currently the majority affirmative vote of the committee decides specification issues and no other approval is required.

Without regulations that define the process for establishing specifications, including approval by the board, the public may not be adequately informed, and the board's accountability is reduced.

The General Assembly has established the State Board of Education as the body obligated under the law for the control and management of school bus transportation in the state. Also vested in the board is the responsibility for operating expenses of state-owned buses and for the replacement of obsolete equipment.

South Carolina Code §1-23-10, *et seq*., outline procedures for agencies to follow in establishing, by regulation, practices that have public applicability. Issues surrounding school bus specifications have public applicability because they involve vendors and local school district personnel. Additionally, decisions about specifications have a material effect on the final cost of a school bus (see p. 9). Without regulations that define the process for establishing specifications, including approval by the board, the public may not be adequately informed, and the board's accountability is reduced.

In the FY 98-99 Appropriations Act, Proviso 1.38 outlined the steps SDE should take in formulating specifications for the expenditures of funds appropriated for new school buses. This proviso, which is no longer in effect, required that a specifications committee "be established within the Department of Education . . . ." In writing this proviso, the General Assembly saw a need to define the specifications process and in so doing make the department accountable. The specifications process used by SDE, which ultimately results in a large expenditure of state funds over a long period of time, now needs to be defined in regulation.

Recommendations

1. The State Department of Education and the Budget and Control Board Materials Management Office should reevaluate the specifications of buses purchased in recent years. This reevaluation should include but not be limited to:

    - The 250 horsepower engine requirement.
    - The frame strength requirement.
    - The practice of purchasing only rear-engine transit buses for regular routes.
    - The practice of purchasing only buses with a seating capacity of 78 passengers for regular routes.

2. While conducting this reevaluation, South Carolina officials should compare South Carolina's specifications and prices with those in other states.

3. The State Department of Education should establish higher- cost school bus specifications only when their benefits and cost-effectiveness can be documented.

4. The State Department of Education should establish school bus replacement schedule goals using formal analysis. The department should then communicate to the General Assembly its estimate of the cost of replacing its school bus and service vehicles using its replacement schedule goals.

5. The General Assembly should consider using a formal replacement schedule for appropriating funds on an annual basis to replace SDE's school buses and service vehicles. To fund this program, the General Assembly should consider whether existing sources of education revenue are sufficient or whether new sources of education revenue are necessary.

6. The State Department of Education should promulgate regulations defining the process for establishing school bus specifications that include input from local school districts and State Board approval of specifications.

Procurement Process

School Bus Procurement Process

We reviewed school bus procurements that were conducted in fiscal year 94-95 and fiscal year 98-99 for SDE by the Materials Management Office (MMO). We found that the process complied with state law although there are concerns about the emergency procurement SDE used for the fiscal year 98-99 school bus purchase and SDE's process for inspecting buses when they are received. We also addressed alternative methods that could be used to purchase school buses.

FY 94-95 School Bus Purchase

In 1994, the General Assembly approved $104,450,000 in bond funds for the purchase of 2,000 new school buses. The purchase, the largest ever made by any state at that time, was to take place over two years. SDE developed the specifications for the buses (see p. 5), and MMO handled the procurement process. Three bids were received and the intent to award was issued on August 4, 1994 for a total price of $103,312,000. The contract terms were for the following transit buses:

Table 3.1: School Bus Purchases Initiated in 1994

Size of Bus	Price Each	Quantity	Total Price
35 passenger	$54,797	200	$10,959,400
78 passenger	$51,307	1,800	$92,352,600

Source: MMO.

A bidder submitted a protest to the contract award which was rejected by the Procurement Review Panel on November 16, 1994. The award was reinstated at the same terms.

FY 98-99 School Bus Purchase

In September 1998, SDE and MMO released an invitation for bids for Type A, conventional, and transit school buses. All responses to this bid invitation were determined to be non-responsive by MMO. A new invitation for bids was issued in November 1998. A vendor submitted a protest regarding the specifications for the buses. All of the concerns regarding the transit buses were resolved except for the frame issue (see p. 7). Rather than resolving the issue, SDE and MMO removed the transit buses from the bid and the bid was reissued with some changes to the Type A and conventional buses. The contract for the Type A buses was awarded for five buses at a price of $32,674.99 each for a total of $163,374.95. In February 1999, the bids for the conventional buses were all rejected because, according to MMO, the bids failed to meet the advertised bid requirements.

Emergency Procurement

SDE's restrictive specifications prevented the purchase of school buses through the regular procurement process. On February 26, 1999, one day after all the bids for the conventional buses were rejected, SDE declared an emergency procurement for the conventional buses. The contract was awarded to the lowest non-responsive bidder for 57 special needs, 15-passenger buses at a price of $68,979 each, for a total of $3,931,803.

SDE's restrictive specifications prevented the purchase of school buses through the regular procurement process.

South Carolina Code §11-35-1570 allows an emergency procurement "only when there exists an immediate threat to public health, welfare, critical economy and efficiency, or safety." South Carolina Regulation 19-445.2110(B) further defines an emergency condition as one that:

> . . . must create an immediate and serious need for supplies, services, or construction that cannot be met through normal procurement methods and the lack of which would seriously threaten: (1) the functioning of State government; (2) the preservation or protection of property; or (3) the health or safety of any person.

SDE justified the emergency procurement because of "insufficient equipment available to transport special needs pupils in school year 1999-2000."

At the inspection of the pilot bus to determine if the bus met SDE specifications, SDE staff noted 26 items which needed correction. A second inspection was required to ensure that the bus met the specifications. As of mid-August 1999, no school buses had been delivered to the school districts.

SDE had attempted to obtain bids for conventional buses since September 1998. However, the bidders could not meet SDE specifications for either the conventional or the transit buses. By having restrictive specifications, SDE was unable to purchase any transit buses and did not receive any responsive bidders for the conventional buses. The lengthy procurement process and the possibility of emergency procurements may continue unless the specifications for school buses are changed or more equivalents are approved (see p. 5).

New Bus Inspection Process

We could find no evidence that SDE staff conduct a follow-up or detailed inspection after buses are delivered to ensure that buses meet SDE specifications. SDE requires bus manufacturers to provide one pilot bus of each type ordered to be inspected by SDE. In January 1995, SDE staff conducted an initial pilot inspection of the school bus chassis and noted 14 items which did not comply with specifications. Another pilot inspection was conducted by SDE and MMO officials in February and March 1995. SDE required correction of 20 of 23 items identified during this inspection and agreed upon measures to resolve these areas. In the remaining three cases, SDE agreed to accept the items without any changes.

After the pilot inspections are completed and all exceptions are resolved, the vendors deliver the school buses to the individual bus shops across the state. According to SDE officials, there is an inspection of the buses upon receipt which is conducted according to a state checklist. Most of the items check that the systems on the bus are operational.

Without additional inspections of the buses received by the school districts, SDE has no assurance that the buses being delivered meet their specifications. To help ensure compliance with specifications, random inspections could be conducted by SDE engineering associates when buses are delivered to a region. An inspection report could be filed with SDE.

Alternative Purchasing Considerations

SDE and MMO could investigate alternative ways to purchase school buses. Some of the methods may better meet the needs of school districts, resulting in reduced prices for buses, and produce a more efficient procurement process.

Multi-State Purchasing

SDE could participate in a bid with another state in order to increase the volume of the purchase and decrease the cost of each bus. Washington state did an analysis comparing South Carolina's purchase of 2,000 buses in 1995 with the cost of Washington's purchase of approximately 450 buses. After adjusting the price to obtain a comparable figure, the study determined that South Carolina's price was $3,700 less per bus than Washington's price. They believe that the large volume of buses purchased contributed to this discount.

SDE could participate in a bid with another state in order to increase the volume of the purchase and decrease the cost of each bus.

In order to participate in multi-state purchasing, however, the specifications might have to be identical and another state would have to be willing to cooperate. According to an MMO official, South Carolina has tried to participate in multi-state purchasing for other items, but has not yet been successful.

Separate Body and Chassis Bidding

Other southeastern states which we surveyed allow vendors to submit separate bids for the bodies and the chassis of the conventional buses. The state then selects the lowest bid for each component. South Carolina requires that bids be submitted with a body and a chassis as a unit with one company responsible for the complete bus.

SDE notes that state tax law is an impediment to separate body and chassis bidding. The sales tax on a combined unit is less than the sales tax on a separate body and chassis.

Flexibility in What is Purchased

Since 1994, SDE has purchased only 78-passenger transit buses, except for special needs buses. The school districts have expressed concerns that other size buses might be more suitable for their needs. SDE could consider seeking input from the school districts on the size buses they need and purchasing conventional or other transit buses to more closely meet district needs (see p. 7).

Specification, Then Price Bidding

The procurement process could be divided into two parts — specifications and price. The first portion would require vendors to submit the specifications of the school buses and any requests for substitutions. Once the specifications were approved, those vendors would provide the price for a bus that met those specifications. By using this method, the protests concerning specifications could be completed and once the funding for school bus purchases was known, the price bids could be submitted. According to an MMO official, some items are purchased using a pre-qualification procedure. MMO pre-qualifies the bidders and bids are solicited only from those vendors.

Recommendations

7. The South Carolina State Department of Education should develop a procedure for conducting more frequent and detailed inspections of the school buses received in the bus shops to ensure that the school buses conform to the department's specifications.

8. The South Carolina State Department of Education and the Budget and Control Board Materials Management Office should consider alternative purchasing methods for school buses to reduce the price and streamline the process.

9. The General Assembly should consider amending state law to allow an exemption so that the sales tax on a bus is the same whether it is purchased as a complete unit or as a separate body and chassis.

Chapter 3
Procurement Process

Appendices

Inventory of School Buses by Bus Shop Location

	Special Needs Buses							Regular Route Buses									GRAND TOTAL	
	Route			Spare		Subtotal		Route				Spare			Subtotal			
Capacity	16-19	19-36	35	16	36	Route	Spare	54	60	66	72-78	54	60	66	Route	Spare	Route	Spare
Abbeville	4	1	3	1		8	1	20	20		30	9	4		70	13	78	14
Aiken	8	6	4	2		18	2	2	55	14	54	1	14		125	15	143	17
Anderson	16	6	8	2		30	2	17	48	18	60	1	14		143	15	173	17
Beaufort	7	6	7	2	1	20	3	6	55	17	61	2	16		139	18	159	21
Berkeley	12	6	6	1	1	24	2	2	42	16	65		16		125	16	149	18
Blackville	3	2	3		1	8	1	9	23	1	32	4	5		65	9	73	10
Brunson	2	2	3	1		7	1	1	40		33	2	8		74	10	81	11
Calhoun	5		1	1		6	1	3	23	3	19	1	2		48	3	54	4
Charleston	22	28	22	4		72	4	7	56	23	69		14		155	14	227	18
Cherokee	4	2	2	1		8	1	1	16		25	7	2		42	9	50	10
Chester	4		2	1		6	1	35	11		51	2	11		97	13	103	14
Chesterfield	5	1	2	1	1	8	2	5	35	1	35		9		76	9	84	11
Clarendon	5		1	1		6	1	9	30	3	36	4	4		78	8	84	9
Colleton	5	8	3	1		16	1	1	50		42		7	2	93	9	109	10
Converse	22	6	15	2	1	43	3	10	38	5	38	1	10		91	11	134	14
Darlington	10	4	5	2	1	19	3	18	30		39	2	6		87	8	106	11
Dorchester	4		2	1		6	1	3	50	4	44	1	9		101	10	107	11
Fairfield	8	3	5	2	1	16	3	1	35	13	34		9		83	9	99	12
Florence	13	5	4	2	1	22	3	4	48		46		11		98	11	120	14
Georgetown	5	3	2	1		10	1	5	41	5	40	4	8		91	12	101	13
Greenville	15	18	9	2	3	42	5		46	5	43		14		94	14	136	19
Greenwood	7	1	3	1		11	1	1	36		32		6		69	6	80	7
Horry	13	6	7	2	1	26	3	52	70	10	99	12	10		231	22	257	25
Johnston	5	5	3	1	1	13	2	30	31	5	53	8	4	1	119	13	132	15
Kershaw	5	3	2	1		10	1	4	38	1	32	2	6		75	8	85	9
Lancaster	5	2	3	1	1	10	2		45	1	39	1	12		85	13	95	15
Latta	6	3	5	1		14	1	4	35	7	46		6	2	92	8	106	9
Laurens	4	3	4	1		11	1	8	28	5	28	1	8		69	9	80	10
Lee	2	3	1	1		6	1	12	11		19	8			42	8	48	9
Lexington	20	9	7	1	2	36	3	6	67	15	63		17	1	151	18	187	21

Appendix A
Inventory of School Buses by Bus Shop Location

	Special Needs Buses							Regular Route Buses									GRAND TOTAL	
	Route			Spare		Subtotal		Route				Spare			Subtotal			
Capacity	16-19	19-36	35	16	36	Route	Spare	54	60	66	72-78	54	60	66	Route	Spare	Route	Spare
Lower Richland	9	9	6	2	2	24	4		43	4	39		13		86	13	110	17
Marlboro	3	2	2	1		7	1	14	13	2	22	6	1		51	7	58	8
Newberry	3	2	2	1		7	1	4	37		32	4	4		73	8	80	9
Oconee	7	2	4	1	1	13	2	42			37	7			79	7	92	9
Orangeburg	11	4	4	1	1	19	2	11	41	4	42	3	13		98	16	117	18
Pickens	9	2	3	1	1	14	2	31	16		40	6	2		87	8	101	10
Richland	16	8	8	2	2	32	4		39	11	53		10		103	10	135	14
Spartanburg	5	4	1	1		10	1	8	34	2	34	1	10		78	11	88	12
Summerville	12	3	6	3	1	21	4	2	66	19	76		12		163	12	184	16
Sumter	7	9	7	2		23	2		54	19	58	1	12		131	13	154	15
Taylors	17	14	13	4	1	44	5	2	50	5	53	1	22		110	23	154	28
Union	7		2	1		9	1	6	18		30		7		54	7	63	8
Williamsburg	7	2	3	2		12	2	23	38		47	2	9		108	11	120	13
York	12	6	5	2		23	2		26	25	40		12	3	91	15	114	17
STATE TOTAL	**371**	**209**	**210**	**65**	**25**	**790**	**90**	**419**	**1,628**	**263**	**1,910**	**104**	**389**	**9**	**4,220**	**502**	**5,010**	**592**

Source: SDE as of March 1999.

Agency Comments

STATE OF SOUTH CAROLINA
DEPARTMENT OF EDUCATION

INEZ MOORE TENENBAUM
STATE SUPERINTENDENT OF EDUCATION

October 18, 1999

George L. Schroeder, Director
Legislative Audit Council
400 Gervais Street
Columbia, South Carolina 29201

Dear Mr. Schroeder:

Thank you for the opportunity to respond to provide our final comments to the Legislative Audit Council's audit report: *A Review of South Carolina School Bus Purchases*. I am including the report on disk and a hard copy for your convenience.

We look forward to working with the South Carolina General Assembly and the Materials Management Office to implement some of the recommendations.

Very truly yours,

Inez M. Tenenbaum
State Superintendent of Education

Enclosure

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South Carolina Department of Education's
Response to the
Legislative Audit Council's Report:
A Review of South Carolina School Bus Purchases

The South Carolina Department of Education (Department) appreciates the opportunity to respond to the Legislative Audit Council's (LAC) report *A Review of South Carolina School Bus Purchases,* and we welcome any suggestions on ways to improve our school bus transportation system. One of the LAC's charges is to determine whether the Department complied with the law in the procurement of school buses. We are pleased that the LAC finds that the Department's procurement of school buses complies with the law in each regard.

LAC Recommendations

The report makes several excellent recommendations that the Department will consider and implement. We look forward to implementing recommendations that will improve the school bus procurement process.

Procurement Recommendations

With regards to LAC recommendation number eight (LAC Report page 21), the Department will explore the feasibility of multi state procurement of school buses. The State Superintendent of Education will send a letter to neighboring states to determine whether those states would have an interest in such an arrangement. If there is interest, we will consult with the Materials Management Office (MMO) of the State Budget and Control Board to develop a multi state solicitation.

With regard to procuring the chassis and body separately (LAC Recommendation nine, Report page 21), the Department will consider that method of procurement if, as recommended by the LAC, the General Assembly creates an exemption in the sales tax law. The present law would increase the cost of a school bus by five percent of the price of the bus body. In addition, the Department would also have to consider warranty issues surrounding separating the chassis and body prior to making the final determination. We will also work with MMO to consider the recommendation of allowing vendors to submit specifications for prior approval. Since the Department has not ever taken part in a procurement where vendors submitted specifications prior to specifications being developed, we would have to work with MMO to determine the feasibly of such a procurement.

Replacement Cycle

The Department concurs with the LAC that a set school bus replacement cycle is needed. (LAC recommendation number four, LAC Report page 14) The Department will confer with the Senate Education Committee and the Education and Public Works Committee of the House of Representatives to create a feasible replacement schedule.

The Department welcomes a study on optimum replacement of school buses, assuming funding is available to conduct a study. A set replacement cycle would have a direct impact on the specifications. If the Department had a shorter replacement cycle it could consider specifications such as smaller engine sizes and lighter duty frame rails. However, the Department has had to rely on inconsistent funding from the General Assembly; therefore, the development of specifications had to focus on vehicle longevity.

The following chart illustrates the funding request made to the General Assembly:

DEPARTMENT OF EDUCATION
SCHOOL BUS REPLACEMENT ACTIONS

Fiscal Year	Budget Requests	Appropriations/ Actual Budget	Expenditures	Number of Buses Purchased
1984-1985	Unknown	$19,228,324	$19,212,006	704
1985-1986	Unknown	$14,465,704	$13,868,630	515
1986-1987	Unknown	$11,168,750	$10,980,639	406
1987-1988	Unknown	$ 0	$25,414,054	931
1988-1989	Unknown	$25,366,372.34	$1,885,604	69
1989-1990	Unknown	$8,134,211	$8,134,211	265
1990-1991	Unknown	$456,855	$456,855	10
1991-1992	Unknown	$1,000,000	$783,205	20
1992-1993	$16,369,550	$ 0	$218,595	5
1993-1994	$46,340,000	$2,000,000	$1,980,562	50
1994-1995	$ 0	$104,450,000	$25,156,772	480
1995-1996	$62,040,000	$5,761,664.61	$84,976,814	1,631
1996-1997	$97,000,000	$ 0	$ 0	0
1997-1998	$ 0	$ 0	$ 0	0
1998-1999	$139,247,000	$4,000,000	$3,931,803	57
1999-2000	$44,000,000	$19,000,000	$ 0	NA

- FY 1985 –1992: The Department did not receive a separate appropriation for school buses. Funds for this purpose were included in the general operating budget for school transportation. The appropriated amount shown in the above table is the Department's actual budgeted amount. This data is taken from the Department's financial records.
- FY 1988: Buses were purchased under a lease purchase agreement. There was no appropriation for this purchase in FY 1998, the appropriation occurred in FY 1989.
- FY 1994-1995: Appropriation was a product of a bond bill.
- FY 1995-1996: Appropriation was unallocated FY 1994-95 EFA Funds (H.3690, Section 6).

- FY 1998-1999: Appropriation was general fund dollars, a purchase order was processed for fifty-six special needs buses and one bus for the School for the Deaf and Blind. The fifty-six special needs buses were received in September 1999.
- FY 1999-2000: Appropriation is from a $15 million bond bill (approved) and a possible $4 million general dollars.
- In FY 1994-1995 and FY 1997-1998: The Department's Office of Transportation submitted internal requests for additional school buses, the Department did not include these requests in the budget submittal to the Governor.

Regulations

The LAC recommended that the State Department of Education promulgate regulations defining the process for establishing school bus specifications. (LAC Recommendation number six, LAC Report p. 15). The Department will submit a drafting notice for the State Board of Education to promulgate a regulation regarding the development of a specifications committee. The regulation should be similar to the language of the proviso that the General Assembly passed in the 1998-1999 fiscal year.

True Costs of a Transportation System

The report compares South Carolina's purchases to those of other southeastern states to show that South Carolina's specifications are more costly. The LAC notes that in selected situations, the buses purchased in other states were less expensive than buses purchased in South Carolina. However, the report readily admits that the LAC only looked at the procurement of buses and did not take into consideration the operational cost of those buses. (LAC Report p. 4) This admission by the LAC sets forth an underlying flaw of the entire report. South Carolina has the lowest per pupil transportation cost in the country. Though this information was given to the LAC, the LAC failed to mention it in the report. Six states were specifically listed under the LAC methodology as states used for comparison. South Carolina's average annual cost per student in 1997-1998 was $208.93. The states, with which the LAC compares the Department for school bus "purchase price" comparison, have the following cost per pupil:

- North Carolina ($271)
- Florida ($538.51)
- Georgia ($275)
- Kentucky ($414.43)
- Virginia ($297.76)

Using these comparisons, instead of simply using initial new bus cost, is an accurate view of the efficiency of South Carolina's system.

Specifications: Safety and Durability

Type of Bus

The LAC questioned the decision by the Department to purchase rear engine transit school buses rather than either conventional buses or front engine transit buses. The determination to purchase the transit model rather than the conventional model in the 1994 bid was based on a variety of factors.

The Department strongly maintains that the rear engine transit buses are safer than conventional buses. The transit buses have a flat front allowing the driver to have a clear unobstructed view of students who are loading or unloading and may be in front of the bus. The LAC notes that conventional buses are equipped with safety crossing arms and mirrors to imply that conventional buses are just as safe. However, all South Carolina buses are equipped with safety crossing arms, not just conventional buses. While safety arms are an important safety feature, they do not prevent a child from standing in front of the bus. Children approaching from the driver's side can do so without being blocked by the arm and children approaching from the other side can simply walk around the arm, as many do. Mirrors are not one hundred percent effective. They can be moved out of position and they often cause distortion. There will always be blind spots with mirrors. The safety of students and school bus safety features are a top priority with the Department and we believe that the rear engine transit buses are safer that conventional buses.

The LAC also questions the Department's opinion that rear engine transit buses are safer than front engine buses. An additional reason the Department chose the rear engine transit bus is the safety feature of having the fuel tank located inside the frame rails and between the axles. This safety feature is not available in front engine transit buses because of the location of the engine. While it is true that the Department does not have actual crash data showing that this feature is safer, it has been shown in the automobile industry that fuel tanks that are protected, as are those in the rear engine transit buses, are less likely to explode on impact.

Another determination that was made in purchasing the rear engine transit bus in the 1994 bid was the ability to remove four hundred buses from the routes because the rear engine transit buses carry more passengers. The State saved a considerable amount of money in bus driver salary and maintenance costs because the buses were removed from the fleet. This was not a one time savings, the State enjoys this savings every day. This cost saving factor was not considered by the LAC. The LAC only looked at the difference in price between a conventional bus and the transit bus.

We agree that in districts with rural routes smaller capacity conventional buses may have better served a particular route; however, when the transit buses were delivered the Department issued a memorandum to the districts stating that they did not have to fill the buses to capacity and that the buses were provided to give districts greater flexibility in running routes.

The Department conducted an analysis of front verses rear engine transit buses based on its 1990 purchase. Based on the data available from the 1990-1991 purchase of both front and

rear engine transit buses, the cost of the front engine transit bus was higher, when considering the per pupil cost. The rear engine seventy-eight passenger transit bus costs $46,209 ($592 per seat) and the seventy-two passenger front engine bus costs $45,162 ($627 per seat). Therefore, when considering the actual cost per seat, the rear engine bus was less expensive.

As for durability, the Department has only operated large numbers of transit buses for four years. Durability data will require ten to fifteen years to accumulate and the tests are ongoing. However, we do know that repair costs from damage in similar collisions are considerably less in vehicles equipped with heavy duty frame rails, a feature of the rear engine transit bus.

Engine Size

The LAC finds that the horsepower required by the Department "may be excessive." This finding is not supported by facts in the audit report and is purely speculative. The LAC did not provide any evidence to support or refute the decision to include a two hundred and fifty horsepower engine as a specification. To say that it "may" be excessive, then to base recommendations regarding cost savings resulting from including a smaller engine, contradicts generally accepted governmental auditing standards. In addition, any discussion of engine performance must include torque ratings. The LAC failed to include this factor in the report.

The LAC is correct in stating that the Department does not have actual documentation that the buses with two hundred and fifty horsepower engines are safer than those with smaller engines. However, we can document that the buses have greater acceleration, which allows buses to merge into highly congested traffic areas, blend with the flow of traffic on interstates and controlled access highways, as well as being able to accelerate across intersections in less time. A manufacturer who suggested the continued use of smaller engines provided data indicating that the smaller engines will lose nineteen miles per hour (mph) on a three percent grade while the larger engines lose only four miles per hour. This is a significant safety factor considering the number of buses that we have operating on roads having a three percent grade. In addition, the LAC found no evidence that the other engines are safer than the two hundred and fifty.

The LAC notes that the Department has not conducted an analysis comparing the cost-effectiveness of higher horsepower engines by comparing the benefits of added durability with the higher price. The Department conducted an analysis of the one hundred and ninety horsepower engines in years 1991-1994. These one hundred and ninety horsepower engines were in the ten buses purchased by the Department in 1990-1991. Since 1991, all ten of those engines have been either rebuilt or replaced. This information was submitted to the LAC but was not included in the report.

The two hundred and fifty horsepower engines included in the bus purchase of 1994-1996 carry a seven year warranty, which was not offered with the smaller horsepower engines in previous bids. This warranty is unprecedented in school bus specifications and contracts. The larger/higher horsepower engines are more durable for a number of reasons. Internal reciprocating components are of a heavier construction. The engine is not forced to work as hard

as the smaller engines and is able to achieve the same speeds at lower revolutions per minute (rpm). The Specifications Committee, looking for a school bus to last twenty years, took all of these factors into consideration when deciding to require the two hundred and fifty horsepower engine.

Frame Rails

The Specifications Committee considered many factors in selecting the frame rail requirements. Durability and safety were given high priority. The Bluebird Bus Company (Bluebird) protested the 1998-1999 school bus specifications. During the protest hearing, an engineer employed by Bluebird testified that the frame rail as specified makes the bus more durable. The frame rail proposed by Bluebird was new, not tested, and at that time was not on any bus being operated in any school district. This same engineer also testified that Bluebird could manufacture the specified frame rail. This information was provided to the LAC and was not included in the report.

The Department provided documentation to the LAC comparing the heavier transit frame rails with the lighter regular frame rails. Information published by the Federal Transit Administration's testing facility was offered regarding the cracking of frame rails on lighter frame strengths and on existing lightweight framed buses in South Carolina's fleet. Again, this information was not included in the report. The Department also explained to the LAC that if a bus replacement schedule was in existence, the specifications could be adjusted and in many cases lowered. However, without a set bus replacement cycle, the Department is forced to buy buses to last an indefinite period of time. Frame rails have a direct correlation to longevity. In fiscal year 2000 the Department received funding to purchase an estimated one hundred and fifty school buses. At this rate of replacement, the State will exchange buses on a thirty-seven year cycle.

Finding that an Analysis Was Not Conducted

The LAC finds in several places that the Department failed to conduct an analysis of cost effectiveness of specifications and failed to conduct a safety analysis comparing transit type buses with conventional school buses. (See LAC Report p. 5 "Without formal analysis of its specifications, Department's ability to assess the safety and cost-effectiveness of new buses is limited. Without formal analysis of its replacement schedule goals, Department's ability to determine its funding needs is limited.") The Department agrees that having a formal analysis of specifications and a replacement schedule would be beneficial. School bus specifications contain thousands of components and requirements; however, an analysis of each of these will be very costly. The creation and use of a specifications committee, composed of the best district and state school bus technicians in the State, to review all specifications has successfully guided the Department's decisions and has served as the Department's formal analysis. The LAC was informed that this process was conducted by the Specifications Committee in 1994, 1998, and continues.

Studies such as those proposed by the LAC could be conducted with additional funding by the South Carolina General Assembly. The Department currently has several ongoing

evaluations and studies of programs that were mandated by the General Assembly. If the South Carolina General Assembly determines that additional analyses are necessary in the procurement of school buses, the Department will fully cooperate to complete these studies and analyses.

The most recent procurement was as a result of a legislative proviso. That proviso reads:

> 1.38. (Department: School Bus Specifications Committee) Prior to the expenditure of funds appropriated for new school buses, there shall be established within the Department of Education a Specifications Committee.
>
> All potential responsive school bus vendors shall be given an opportunity to appear before the Specifications Committee to present their recommendations for school buses purchased by the State. Not until after the presentations are made will the Committee adopt specifications for administration and review by the Budget and Control Board
>
> Both Type C front engine and Type D rear engine bus configurations shall be approved and available for purchase in passenger categories above thirty-six pupils regardless of bus application. The term of any contract awarded shall not extend beyond June 30, 1999.

This proviso governed the method of choosing specifications for the 1998-1999 fiscal year. The proviso did not require that the Department conduct a formal analysis of specifications, which would have required an outside consulting firm to be hired. If the Department did, as the LAC recommends, hire a consulting firm to conduct a detailed analysis of specifications, the Department would have had to develop a Request for Proposals. The selection of the vendor would have taken several months. The vendor would then have to conduct the analysis, leaving little time to empower a specifications committee, as was required by the proviso, to develop specifications. The proviso stated that the contract awarded would expire June 30, 1999. With such a short contract period it would have been impossible to conduct the analysis that LAC would have required.

The Department points out that the State of Washington Joint Legislative Audit and Review Committee conducted a K-12 Transit –Style School Bus Study in 1996. This Committee hired Wilkins and Associates, a vehicle management consultant, to evaluate the South Carolina school bus specifications. The Committee's report quotes Mr. Wilkins as follows.

> The State of South Carolina bid specifications were written to allow competitive bidding from different manufacturers. Bidders were allowed to bid any one of three different diesel engines, and the front and rear axles were only specified by a minimum capacity rating. The bid specifications set standards for a good, basic bus equipped with few options and upgrades. The bid specifications were very long and detailed to assure the agency South Carolina Department of Education that they would be receiving a good product, regardless of the make of product purchased. This is good. There was no doubt about what the purchaser wanted to buy. This resulted in a very competitive bidding.

The Department would welcome direction from the General Assembly to conduct an analysis of specifications, assuming funding is provided to conduct such a study.

Procurement Issues

Protest Issues

The LAC states in the report that the Department's "restrictive specifications prevented the purchase of school buses through the regular procurement process." There was no allegation by any manufacturer that the 1998-1999 specifications were restrictive. With regard to frame rails, Bluebird wanted to provide its standard frame rail rather than provide the more durable specified frame rail. Bluebird simply wanted to sell the Department its standard frame. The protest process allows vendors to protest specifications. Many of the issues raised by Bluebird were without merit. Most of the issues raised were regarding specifications that Bluebird later, in testimony before the procurement hearing officer, readily admitted it could provide. The cause of the delay of this procurement was not the Department's specifications, but Bluebird's insistence in protesting specifications that in fact it could and did meet.

The LAC correctly points out that all issues, except for the frame rail issue, raised by Bluebird were resolved by agreement. As stated previously, the issue regarding frame rails was not that the specification was restrictive but rather what the manufacture found convenient to manufacture. There was never any allegation that Bluebird could not produce the specified frame rail. Bluebird simply wanted the Department to accept their "new" standard frame rail, which as stated earlier in this response, was brand new, untested, and not in production when the bid process started on September 1, 1998. Also, it must be made clear that no other vendor objected to the frame rail specification.

Emergency Procurement

The LAC stated that the Department's "restrictive specifications prevented the purchase of school buses through the regular procurement process." (Report page 18). The LAC correctly states that one day after the bids for conventional buses were rejected, the Department declared the emergency procurement. However, the reason why the bids for the conventional buses were rejected in the 1998-1999 procurement was not because the vendors could not meet the specifications, but because each vendor failed to properly complete the questionnaire portion of the bid. Procurement law is very specific with regards to responsiveness and this oversight by the vendors caused the bids to be deemed nonresponsive. There was not enough time to resolicit bids and award a contract before the next school year. The student transportation program was in desperate need of additional school buses designed to serve special needs students. The manufacture of school buses is a six month process. To assure that buses were available for the 1999-2000 school year, buses had to be ordered in early March 1999. S.C. Code of Regulations Section 19-445.2110(B) defines emergency as "an immediate and serious need for supplies, services, or construction that cannot be met through normal procurement methods and the lack of which would seriously threaten: (1) the functioning of State government; (2) the preservation or protection of property; or (3) the health or safety of any person."

The emergency procurement issued by the Department proved to be the best alternative available to guarantee a timely delivery of the necessary buses to serve special needs students. The Department was faced with the situation of having to use back up school buses to operate routes serving special needs children. In the event of a school bus break down or mandatory inspections, the Department would not have extra back-up buses available. The special needs students riding these routes would be late for school, opening both the State and local school districts up to scrutiny for violating federal law. Since some special needs children require wheelchair lifts or other accommodations, regular route buses could not be used to transport those students in emergency situations. School districts throughout the State can confirm that additional buses to serve special needs routes are required for the 1999-2000 school year, that this requires the use of back-up buses, and creates a critical need for new buses. The buses have now been received and are in service.

Inspection Process

The Department conducts a sequenced comprehensive inspection program with all new school buses. This program includes inspections while a school bus is being manufactured, when the school bus is delivered to the shop, and while the school bus is under warranty. The sequence begins with the inspection of a pilot school bus model. The manufacturer is required to manufacture a pilot school bus for inspection to assure that bid specifications are being met. During the manufacturing process the Department staff also performs scheduled and unannounced inspection visits of the manufacturing facility to randomly inspect school buses while they are still on the assembly line. Once the school bus is delivered to a school bus shop, each bus receives an operational systems inspection. This inspection assures that all school buses operate according to specification requirements. The systems inspection is followed by a detailed "specifications" inspection. This inspection assures that each school bus was delivered according to the Department's detailed component specifications. The Department is also responsible for the daily maintenance of all school buses; the Department's maintenance and safety inspection program is yet another sequence in the inspection program. The Department's specifications require a minimum of a five-year or unlimited mileage warranty on all school bus components. Over this five-year warranty period, every inch of a school bus is checked and rechecked. If a vehicle does not meet a specification, the manufacturer is required to correct the error at its expense. Contrary to the LAC report, this comprehensive sequence of inspections has been performed on every vehicle purchased by the Department and continues daily under our vehicle maintenance and safety inspection programs.

Regulatory Authority

The LAC noted that the State Board of Education has not promulgated regulations for establishing school bus specifications. The LAC states that the "issues surrounding school bus specifications have public applicability because they involve vendors and local school district personnel."

The Department contends that specifications should not be in regulation since specifications need to be flexible and change, as change is needed. This allows the

development of specifications for the type of school bus needed for each purchase and allows the Department to purchase buses with features not previously available.

As stated earlier in this response the Department will request that the State Board of Education promulgate regulations regarding the establishment of a specifications committee. However, regarding the actual procurement of school buses, it is the responsibility of the Budget and Control Board pursuant to the Consolidated Procurement Code to adopt regulations that establish the State's procurement process. These regulations are currently in effect. The State Board of Education does not have authority to promulgate regulations that would conflict with the existing regulations. Therefore, any State Board of Education regulation will be limited to the establishment of a specifications committee.

Finally, regarding approval of the purchase of school buses, except for the most recent purchase, which was governed by 1998-1999 proviso 1.38, the State Board of Education has approved the purchase of school buses. The LAC was advised of this fact but chose not to include it in their report.

Conclusion

The safety of the children riding on our school buses is of paramount concern. When considering those specifications concerning safety, the Department will not lower safety standards based on costs. The Department is charged with controlling the long term operating cost of the State's school bus fleet. This cost has a far greater impact on the total cost of student transportation than does the purchase price of a school bus. We agree with the LAC that the Department should look at cost saving options whenever possible. We would welcome the funding to conduct the type of study suggested in the LAC's report. Such a study would certainly allow the Department to better present information to the General Assembly on the needs of South Carolina. We look forward to implementing some of the recommendations of the LAC and to continue the goal of offering the best school bus transportation system in the Country.

STATE OF SOUTH CAROLINA
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OFFICE OF GENERAL SERVICES

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ROBERT W. McCLAM
DIRECTOR

October 18, 1999

Mr. George L. Schroeder
Director
Legislative Audit Council
400 Gervais Street
Columbia, South Carolina 29201

Dear Mr. Schroeder:

The Office of General Services appreciates the opportunity to respond to the report entitled *A Review of South Carolina School Bus Purchases*. We welcome the Legislative Audit Council's review of all procurement areas. As always, we are amenable to your recommendations for purchasing methods for school buses that may allow the State Department of Education (SDE) and the Materials Management Office (MMO) to better meet the needs of our state's educational system, obtain lower prices and produce a more efficient procurement process. For your consideration and that of your readers, we respectfully offer the following response to clarify our practices and processes for acquiring school buses.

The SDE establishes its needs for school buses including the types of buses to be procured and the specifications to be used in the solicitations. By enactment of Proviso 1.38 of the 1998/99 General Appropriations Act, the General Assembly created within the SDE a specifications committee and authorized the committee to develop specifications for procurements of school buses. MMO was invited to participate in this process only as an observer to the SDE specifications committee. MMO processes the solicitations, determines the responsiveness of the bids received, and awards contracts to successful vendors in accordance with the Consolidated Procurement Code.

MMO is utilizing a variety of alternative purchasing methods in the current solicitation (Solicitation 00-S2071) including:

1. Allowing for the purchase of the 190 horsepower engine in the Type A bus,
2. Purchasing all three types of buses,
3. Purchasing a variety of seating capacities in the Type C and D buses, and
4. Allowing for prequalification of bus equipment before bids are requested.

We believe each of the above innovations will enhance competition, reduce the price of school buses purchased, and streamline the solicitation process.

MMO has surveyed all southeastern states about their willingness to participate in cooperative procurements. Eight of the sixteen states surveyed indicated their support of cooperative purchasing generally. However, none of those states suggested cooperative procurements of school buses. MMO is prepared to survey those states again to determine their willingness to participate in cooperative purchases of school buses.

MMO requires that the vendor community determine who will respond to the complete bid for the body and chassis as a unit. Whichever manufacturer (body or chassis) responds to the solicitation is contractually responsible for the finished product. Considerations: Under the existing tax statutes, by purchasing the complete bus, the state saves 5% sales tax per unit on the body and pays only a flat $300.00 fee for tax on the chassis as a vehicle.

Example: Bus body is approximately $22,000.00. $22,000.00 x 5% = $1,100.00. Based on the current solicitation, of 100 Type D buses, the estimated savings in sales tax for one bus type is $110,000.00. (100 Type D Buses x $1,100.00 = $110,000.00).

At one time MMO solicited bids separately for bodies and chassis. Experience discouraged that procurement method. In separate bids for body and chassis, neither manufacturer may accept responsibility for total unit failure (i.e. "finger-pointing"). This could require litigation between the state and contractors involved; increasing the actual delivered price of each unit.

It has been a pleasure working with your staff as they conducted the audit and we are prepared to cooperate with the SDE to implement the recommendations addressed in this report. If we may be of further assistance, please let me know.

Sincerely,

Robert W. McClam
Director
Office of General Services

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